

**APPLICATION FOR AUTHORIZATION TO USE
RADIOACTIVE MATERIALS ON VESSELS OPERATED**

by the **SCHOOL OF OCEANOGRAPHY**

RSO Form 13-OV (12/00)

Docket Number _____

1. Name: _____ **Title/Position:** _____
Address: _____ **Period of Use:** From _____
Phone Number: _____ To _____

2. Individual(s) who will handle licensed material. A current RSO Form 20 must be attached for each person listed below, including applicant.

OFFICE USE

Full Name	Title/Position	20	Class
a) _____	a) _____	_____	_____
b) _____	b) _____	_____	_____
c) _____	c) _____	_____	_____

3. Radioactive Material to be Used:

Element and Mass Number	Chemical and/or Physical Form	Maximum Number of Millicurie Which Will Be Possessed
a) _____	_____	_____
b) _____	_____	_____
c) _____	_____	_____
d) _____	_____	_____
e) _____	_____	_____

4. Use of Material. Describe the proposed use of each item in Item 3. (Include Waste Disposal Methods)

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OPERATED by the SCHOOL OF OCEANOGRAPHY**

5. **Locations of Use:** (Include Labs Used on UW Campus, Ship Name)

6. **Name of Cruise, Destination of Cruise:** (Geographical Area of Research)

7. **Attach a copy of your authorization to use radioactive material from your home institution.**

8. Waste Disposal Requirements:

OFFICE USE

- a) Applicant agrees to follow current waste disposal practices as summarized in the School of Oceanography's Marine Operations Instruction 5456.1.
- b) Applicant agrees to maintain a record (RSO Form 160) of the use of all radioactive materials and all waste disposals for each mode of disposal. These forms must be completed and turned in to the responsible Marine Tech at the end of the cruise. The forms will then be forwarded to the RSO for final review. Failure to complete and return these forms could jeopardize future work on Oceanographic research vessels.

_____ *Initials Required*

9. Radiation Protection Program:

OFFICE USE

Applicant agrees to survey areas used for radioactive materials and complete a final report (RSO Form 180). This form must be turned in to the responsible Marine Tech at the end of the cruise. The forms will then be forwarded to the RSO for final review. Failure to complete and return these forms could jeopardize future work on Oceanographic research vessels.

_____ *Initials Required*

The applicant agrees to comply with all conditions of the authorization issued by the Radiation Safety Office and with the procedures set forth in School of Oceanography Marine Operations Instruction 5456.1.

10. **Applicant's Signature:** _____

Type or Print Name: _____ Date: _____

Review by School of Oceanography Marine Operations Staff

Approved: _____
Manager of Marine Operations Date

Review by Radiation Safety Office Staff

Recommendation: Approve Disapprove By _____

Date _____

TRAINING AND EXPERIENCE IN USE OF RADIATION

RSO Form 20 (1/01)

Office Use Only:

Authorized Investigator # _____

Training Required _____ Took RS Class

In order to be added to an authorization to use Radioactive Materials (RAM), this form must be completed and returned to the Radiation Safety Office.

- If you **have not** previously submitted this form, complete Sections 1-8. (To receive credit for training at other institutions, be sure to fill out Section 7.)
- If you **have** previously submitted Form 20, complete only Sections 1-5.
- Remember to **sign and date** this form (Section 5).

1. **Name** (First) _____ (Middle) _____ (Last) _____

Sex: M F **Soc Sec #** _____ **Birth Date** _____

UW Title/Position _____ **Phone** _____

Department _____ **Box #** _____

2. **Authorized Investigator** (*Under whom labs are certified & RAM is ordered.*) _____

Supervisor _____

3. **Did you take the UW's Radiation Safety Training Course?** Yes **Date** _____

No

4. **Radiation Work** (*Describe briefly your **current** or **expected** work with radiation*)

5. **Education** (*List Degrees, Major Subject, Emphasis, Date, and School*)

6. **This information is correct to the best of my knowledge. I agree to conform to the Rules and Regulations for Radiation Protection WAC-246 and UW Radiation Safety policies.**

Signature _____ **Date** _____

**COMPLETE SECTIONS 7 and 8 ON THE BACK OF THIS FORM,
UNLESS you have previously submitted a Form 20**

7. **Other formal training in Radiation Safety. Please complete for training received at institutions *other than* the University of Washington.**

a) *Principles and Practices of Radiation Protection:*

Where _____ When _____

Instructor _____ Duration _____

b) *Radioactivity Measurement Standardization and Monitoring Techniques and Instruments:*

Where _____ When _____

Instructor _____ Duration _____

c) *Mathematics and Calculation of Radioactivity:*

Where _____ When _____

Instructor _____ Duration _____

d) *Biological Effects of Radiation:*

Where _____ When _____

Instructor _____ Duration _____

8. **Experience** (*List work experience with radiation*)

Date Used	Location	Isotope	mCi/Month	Type of Research
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On-The-Job Training

FORM 160 RADIOACTIVE MATERIAL DELIVERY AND USAGE RECORD (5/00)

AUI Name _____ PO # _____

AUI # _____ Item # _____

Order Date _____ Order # _____

Radionuclide (Chemical Form) _____ Definition # _____

Description _____ Activity _____ mCi

Comments _____ Delivery Date _____

PACKAGE RECEIPT INFORMATION

RADIATION SAFETY'S RESPONSIBILITY (WAC 246-221-160(2)):

The external surface of packages must be surveyed if they are labeled with a Radioactive White I, Yellow II or Yellow III label. Swipes will be counted using the Beckman β -Mate II LSC #185185 unless indicated otherwise on this form.

PACKAGE SURFACE CONTAMINATION (WAC 246-221-160(4)):

< 22 dpm/cm² β and/or γ _____

< 2.2 dpm/cm² α _____

Survey not required

If contamination is found, immediately notify the final carrier and then by telephone and telegram, mailgram or facsimile notify DOH.

INVESTIGATOR'S RESPONSIBILITY (WAC 246-221-160(5)):

The authorized investigator shall: 1) establish and maintain procedures for safely opening packages containing radioactive material, 2) ensure that such procedures are followed, and 3) review the instructions for the type of package being opened and monitor the packing material for potential contamination. Prior to disposal of material as nonradioactive waste, ensure that: 1) only background levels of radiation are present, and 2) radioactive labels are defaced on packing material before disposing in normal waste stream.

Contact Person _____ Date _____ Box # _____ Phone _____

DISPOSAL RECORD

Summarize estimated activity for each type of use or disposal. *Retain a copy of this form for 2 calendar years after disposal of material!*

Collected by RSO	mCi
A. Animal Carcasses & Waste	_____
B. Solid Dry, LSA Box	_____
C. Absorbed Aqueous Liquid	_____
D. LSC Vials	_____
E. LSC Bulk Fluid	_____

Released to Environment

- F. Sewer _____
- G. Vaporized to Atmosphere _____

Other

- H. Administered to Humans _____
- I. Decayed _____
- J. Holding for Decay (For at least 10 half-lives, only if half-life < 100 days.) _____
- K. Other (describe or circle type) Not received; Returned to vendor; Long lived unusable storage _____

Transferred To AUI _____

Date of Transfer _____

Tech Contact _____

Bldg _____ Room _____

Subtotal _____

Activity Remaining and/or Reusable Product

Started New Form 160 _____

Must equal activity received as shown above **Total** _____

RETURN TO: Radiation Safety Office, Box 354400

REPORT ON USE OF RADIOACTIVE MATERIAL ON UNIVERSITY OF WASHINGTON RESEARCH VESSELS OR OTHER RESEARCH VESSELS

RSO Form 180 (12/00)

COMPLETE AND RETURN TO RADIATION SAFETY OFFICE (BOX 354400) AFTER EACH MAJOR CRUISE

1. Principal Investigator	2. Authorized Investigator (If UW Investigator)
3. Project Title	4. Radionuclide(s)
5. Vessel	6. Captain
7. Cruise Description or Title of Cruise	8. Dates
9. Waters (Describe standard map locations or latitude and longitude and jurisdiction.)	
10. Radioactive Materials Taken on Board (Radionuclide, mCi, and Chemical/Physical Form)	
11. Description of Use of Radioactive Materials (Include Experimental Procedures & Safety Practices)	
12. Associated Personnel	
13. On Board Radiation Surveys	
14. Survey Instruments on Board	
15. Radioactive Materials Returned to UW as Samples or Stock Soln (Radionuclides and mCi)	
16. Radioactive Materials Returned to Other Institutions (Name Institutions)	
17. Waste Returned to UW (Radionuclides, mCi, and Chemical/Physical Form)	
18. Radioactive Materials Accidentally Lost Overboard (Report Location, Date, Activity, and Radionuclide. Attach complete description of event.)	
19. Final Monitoring and Clean Up Assured	
Signature of Principal Investigator	Date

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